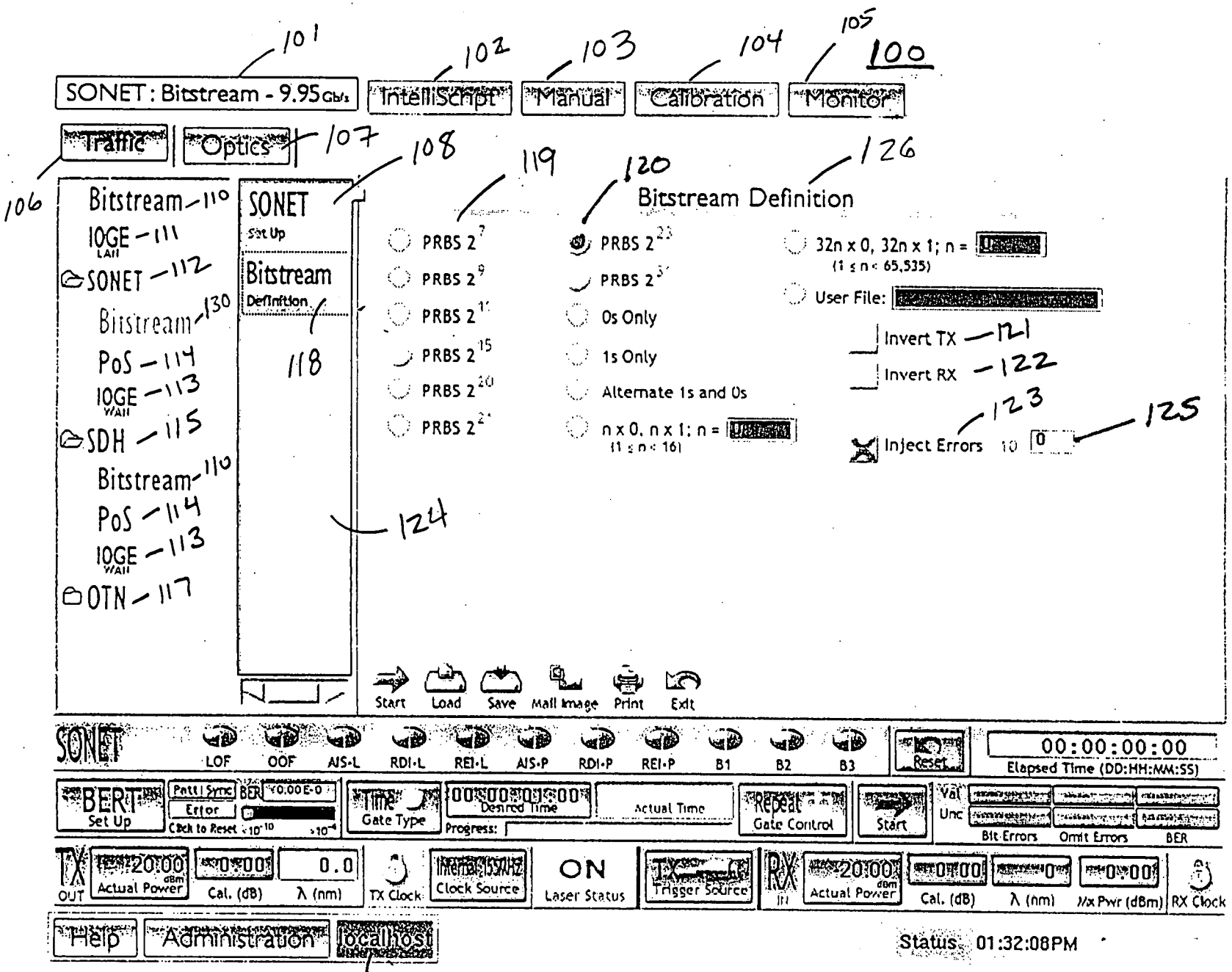

101
SONET : Bitstream - 9.95 Gb/s
102
IntelliScript
103
Manual
104
Calibration
105
Monitor
100
Traffic
Optics
107
106
108
119
120
126
Bitstream 110
10GE LAN 111
SONET 112
Bitstream 130
PoS 114
10GE WAN 113
SDH 115
Bitstream 110
PoS 114
10GE WAN 113
OTN 117
SONET
Set Up
Bitstream
Definition
118
Bitstream Definition
PRBS 2^7
PRBS 2^9
PRBS 2^11
PRBS 2^15
PRBS 2^20
PRBS 2^23
PRBS 2^31
0s Only
1s Only
Alternate 1s and 0s
n x 0, n x 1; n =
(1 ≤ n ≤ 161)
32n x 0, 32n x 1; n =
(1 ≤ n ≤ 65,535)
User File:
Invert TX 121
Invert RX 122
Inject Errors 123
10
0
125
124
Start
Load
Save
Mail Image
Print
Exit
SONET
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT
Set Up
Patt Sync
Error
BER
Click to Reset
Time
Gate Type
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX
OUT
Actual Power
Cal. (dB)
λ (nm)
TX Clock
Clock Source
ON
Laser Status
Trigger Source
RX
IN
Actual Power
Cal. (dB)
λ (nm)
Rx Pwr (dBm)
RX Clock
Help
Administration
localhost
109
Status 01:32:08PM

Fig. 1

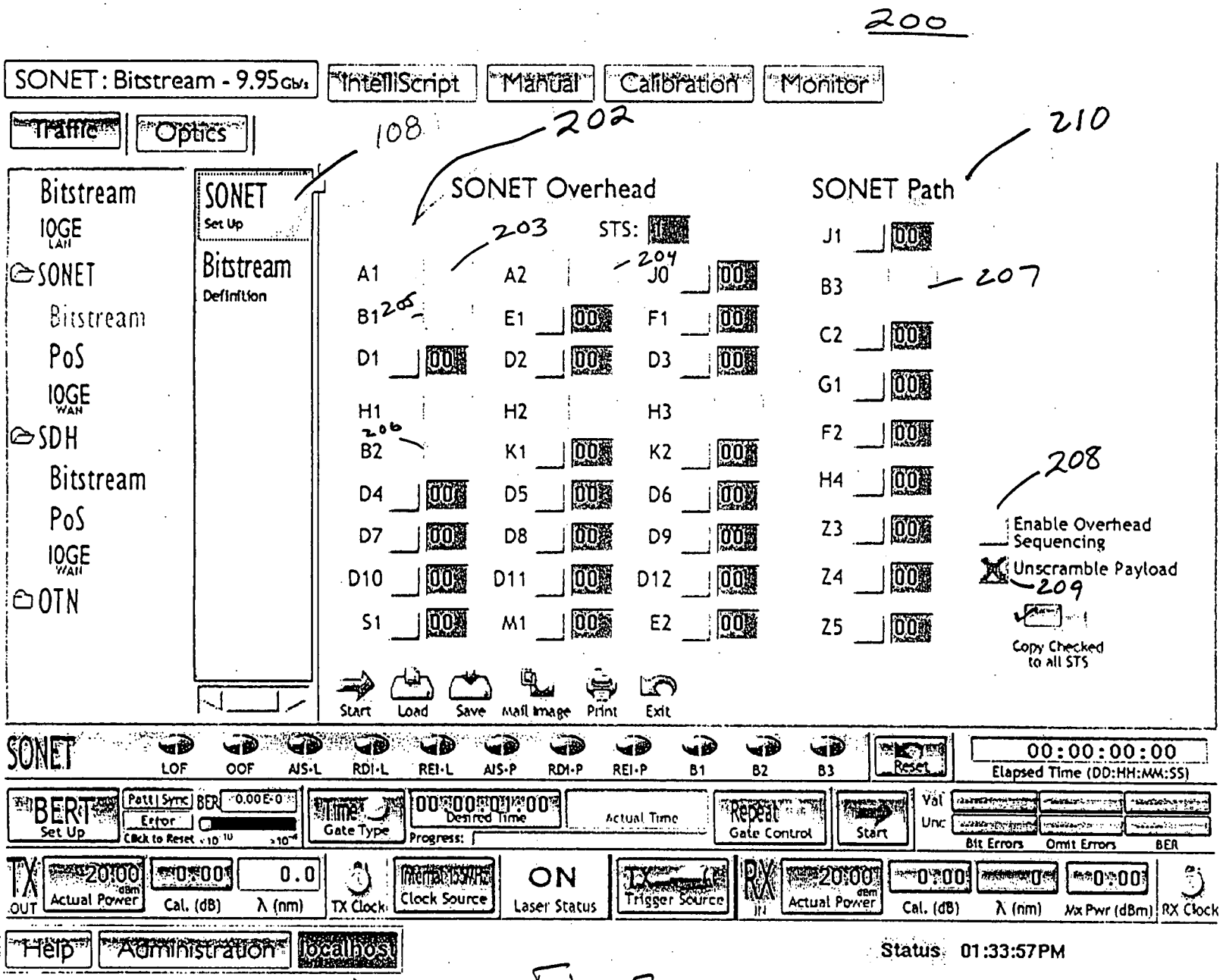

200
SONET : Bitstream - 9.95Gb/s
IntelliScript
Manual
Calibration
Monitor
Traffic
Optics
108
202
210
Bitstream
10GE LAN
SONET
Bitstream
PoS
10GE WAN
SDH
Bitstream
PoS
10GE WAN
OTN
SONET
Set Up
Bitstream
Definition
SONET Overhead
SONET Path
203
204
207
205
206
208
209
STS:
A1
A2
J0
B1
E1
F1
D1
D2
D3
H1
H2
H3
B2
K1
K2
D4
D5
D6
D7
D8
D9
D10
D11
D12
S1
M1
E2
J1
B3
C2
G1
F2
H4
Z3
Z4
Z5
Enable Overhead Sequencing
Unscramble Payload
Copy Checked to all STS
Start
Load
Save
Mail Image
Print
Exit
SONET
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT
Set Up
Patt | Sync
Error
BER
0.00E-0
Click to Reset
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX
OUT
20.00
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 155MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX
IN
20.00
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 01:33:57PM

Fig. 2

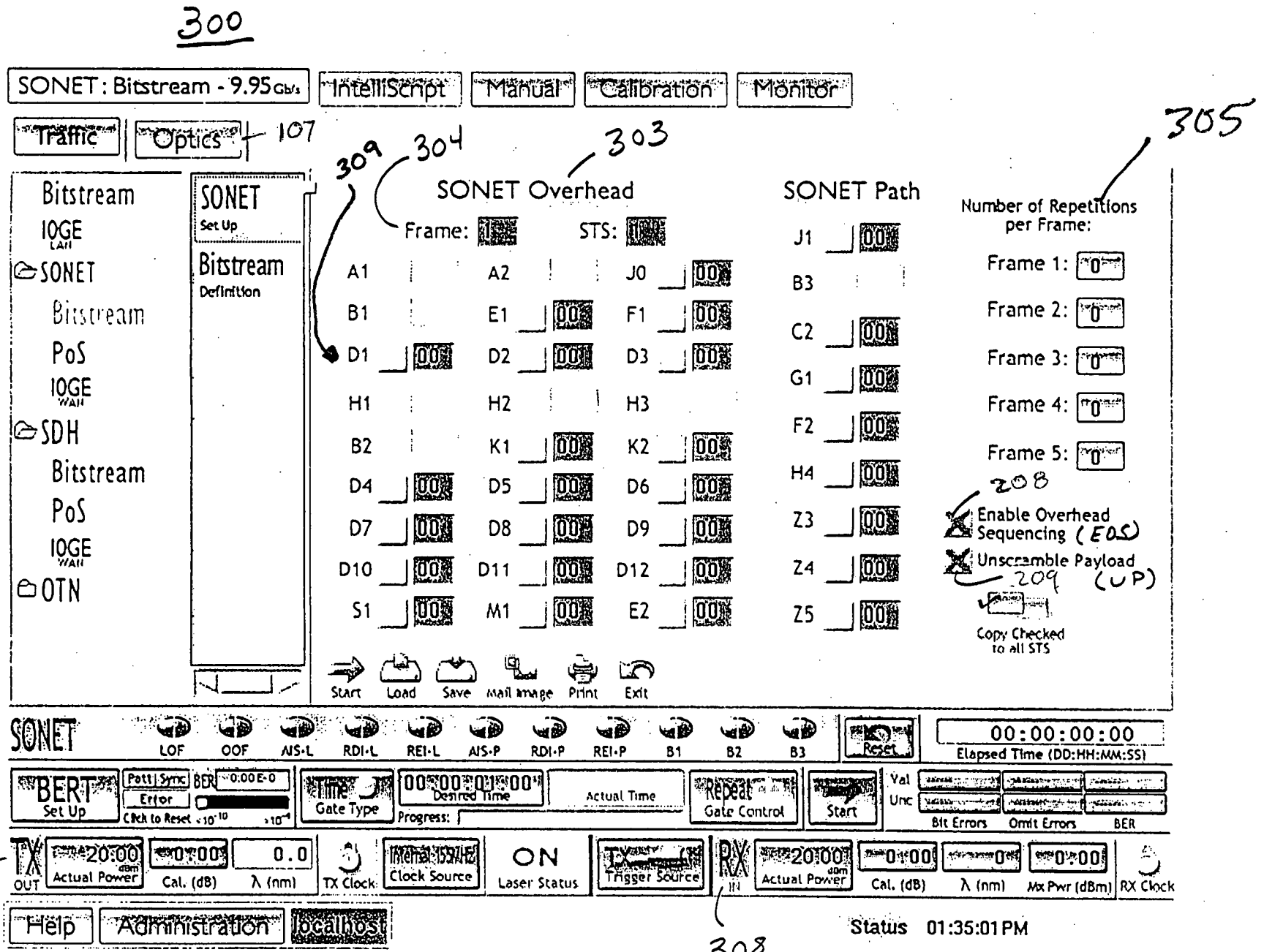
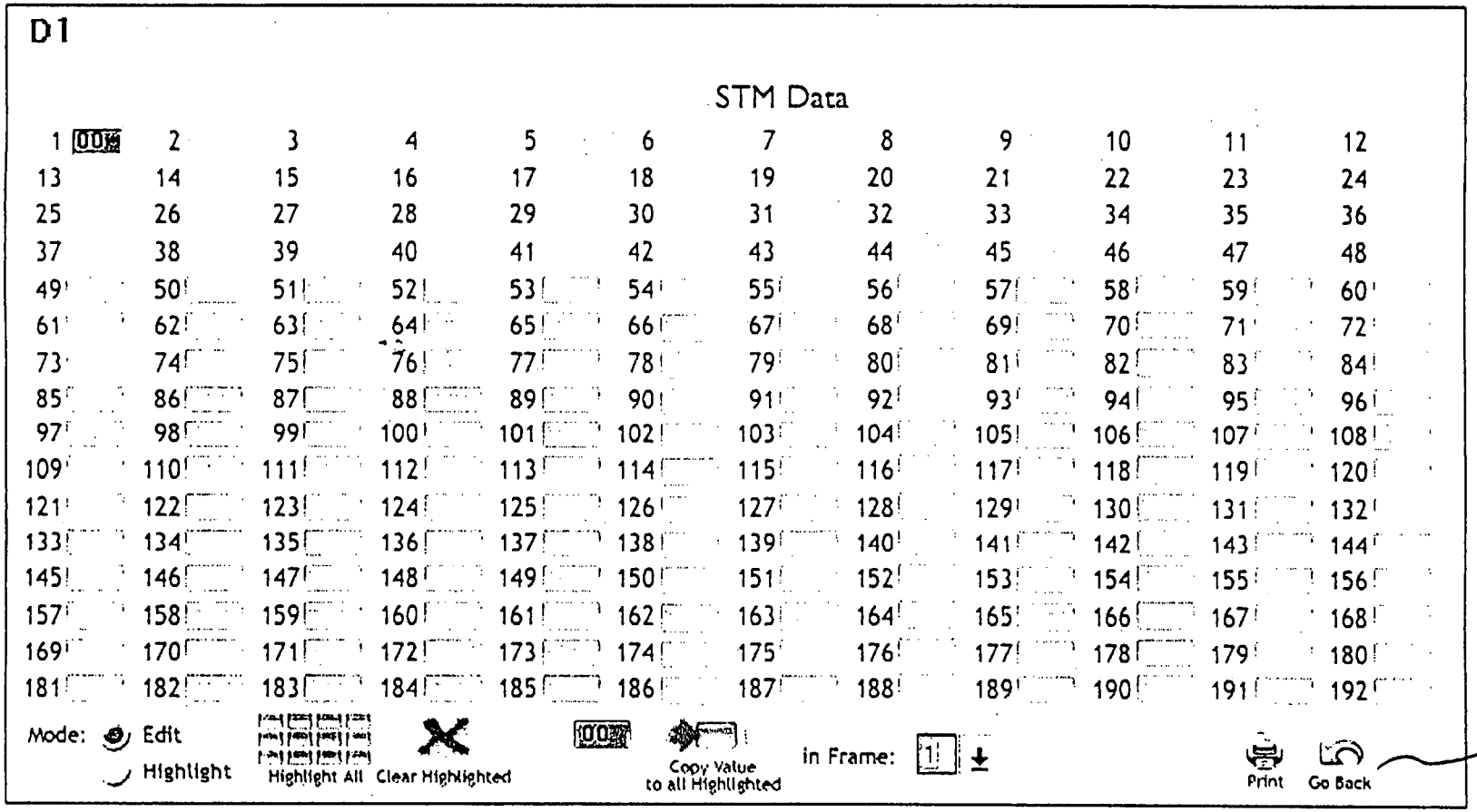

300
SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
Traffic
Optics
107
309
304
303
305
Bitstream
10GE LAN
SONET
Bitstream
PoS
10GE WAN
SDH
Bitstream
PoS
10GE WAN
OTN
SONET Set Up
Bitstream Definition
SONET Overhead
Frame:
STS:
A1 A2 J0
B1 E1 F1
D1 D2 D3
H1 H2 H3
B2 K1 K2
D4 D5 D6
D7 D8 D9
D10 D11 D12
S1 M1 E2
SONET Path
J1
B3
C2
G1
F2
H4
Z3
Z4
Z5
Number of Repetitions per Frame:
Frame 1: 0
Frame 2: 0
Frame 3: 0
Frame 4: 0
Frame 5: 0
208
Enable Overhead Sequencing (EOS)
Unscramble Payload (UP)
209
Copy Checked to all STS
Start
Load
Save
Mail Image
Print
Exit
SONET
LOF OOF AIS-L RDI-L REI-L AIS-P RDI-P REI-P B1 B2 B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT Set Up
Patt Sync
Error
BER
Click to Reset
Time Gate Type
Desired Time
Actual Time
Progress:
Repeat Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
Actual Power
Cal. (dB)
λ (nm)
TX Clock
Clock Source
Laser Status
Trigger Source
RX IN
Actual Power
Cal. (dB)
λ (nm)
Mx Pwr (dBm)
RX Clock
307
308
Help
Administration
localhost
Status 01:35:01 PM

Fig. 3

400


D1
STM Data
1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24
25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60
61 62 63 64 65 66 67 68 69 70 71 72
73 74 75 76 77 78 79 80 81 82 83 84
85 86 87 88 89 90 91 92 93 94 95 96
97 98 99 100 101 102 103 104 105 106 107 108
109 110 111 112 113 114 115 116 117 118 119 120
121 122 123 124 125 126 127 128 129 130 131 132
133 134 135 136 137 138 139 140 141 142 143 144
145 146 147 148 149 150 151 152 153 154 155 156
157 158 159 160 161 162 163 164 165 166 167 168
169 170 171 172 173 174 175 176 177 178 179 180
181 182 183 184 185 186 187 188 189 190 191 192
Mode:
Edit
Highlight
Highlight All
Clear Highlighted
Copy Value to all Highlighted
in Frame:
1
Print
Go Back

401

Fig. 4

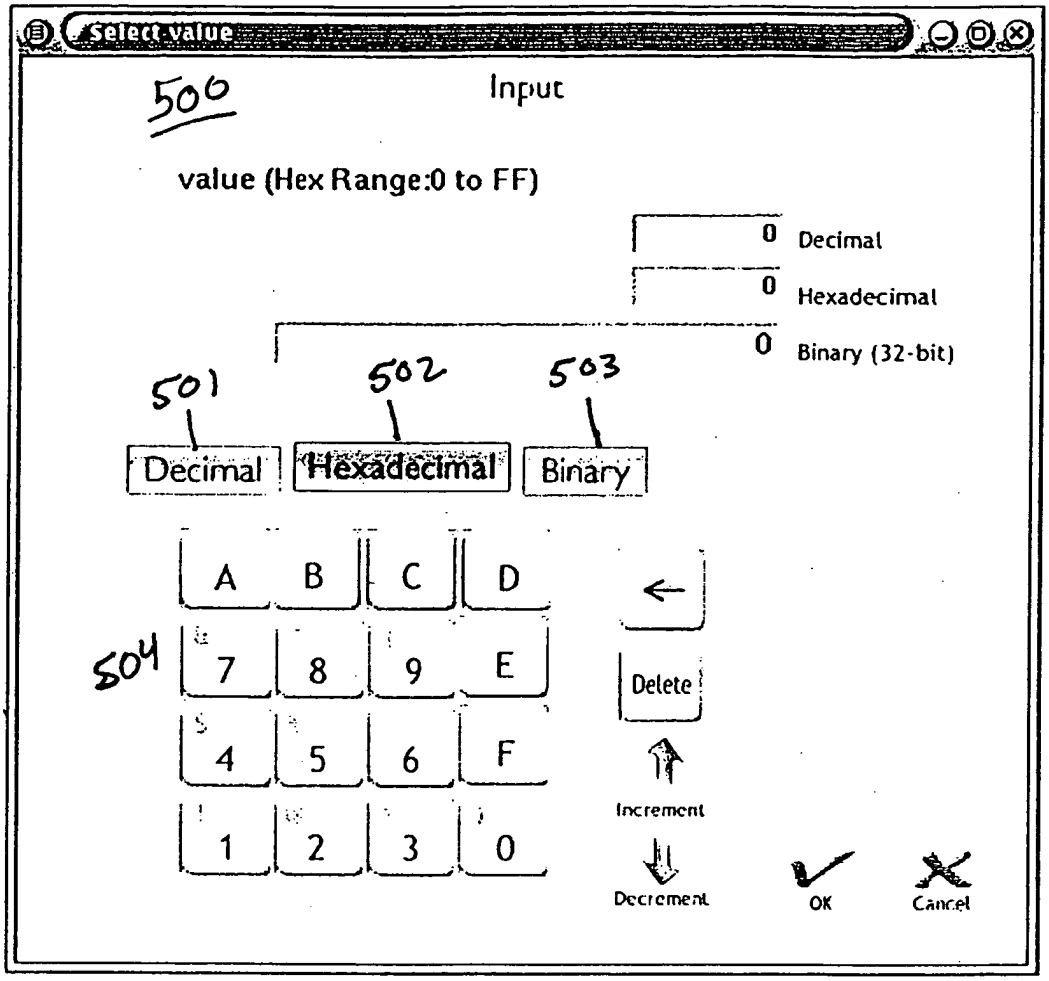

Select value
500
Input
value (Hex Range:0 to FF)
0 Decimal
0 Hexadecimal
0 Binary (32-bit)
501
502
503
Decimal
Hexadecimal
Binary
504
A B C D
7 8 9 E
4 5 6 F
1 2 3 0
Delete
Increment
Decrement
OK
Cancel

Fig. 5

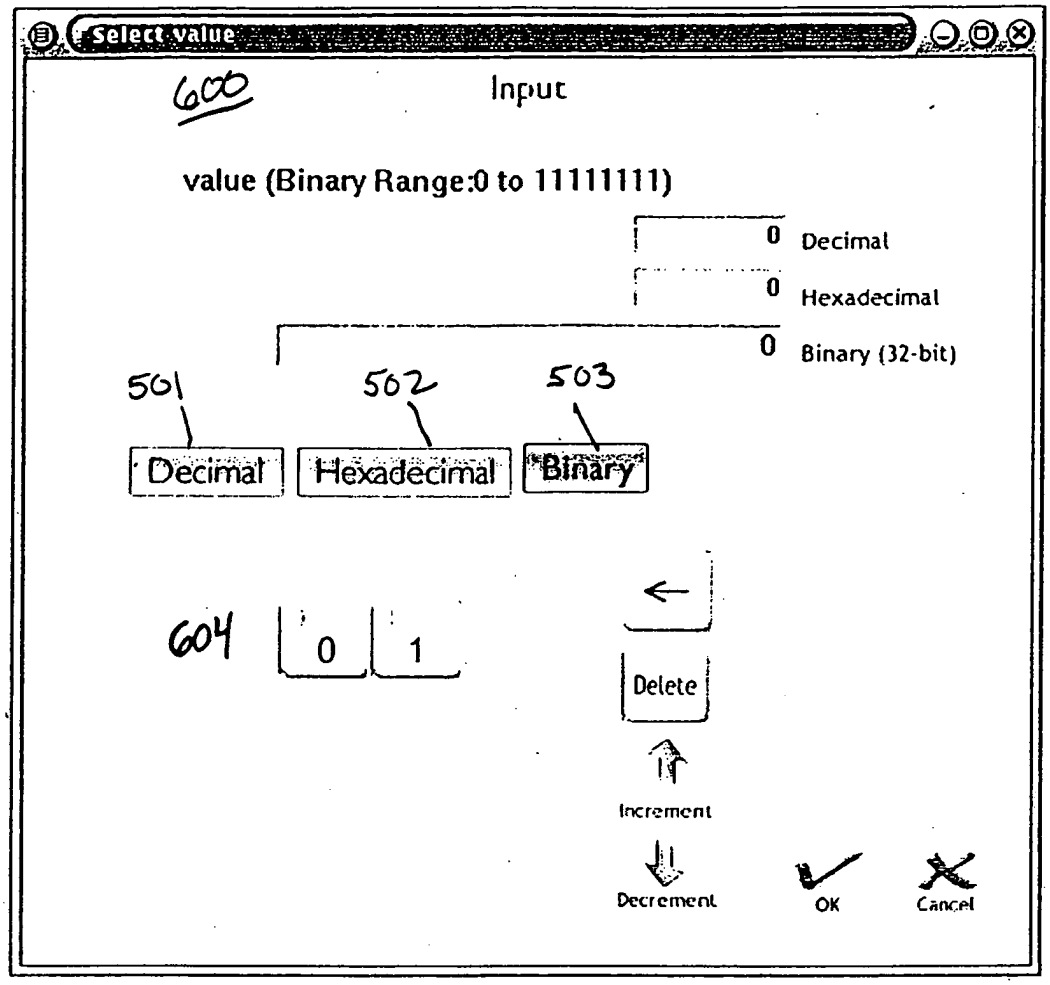

Select value
600
Input
value (Binary Range:0 to 11111111)
0
Decimal
0
Hexadecimal
0
Binary (32-bit)
501
502
503
Decimal
Hexadecimal
Binary
604
0
1
Delete
Increment
Decrement
OK
Cancel

Fig. 6

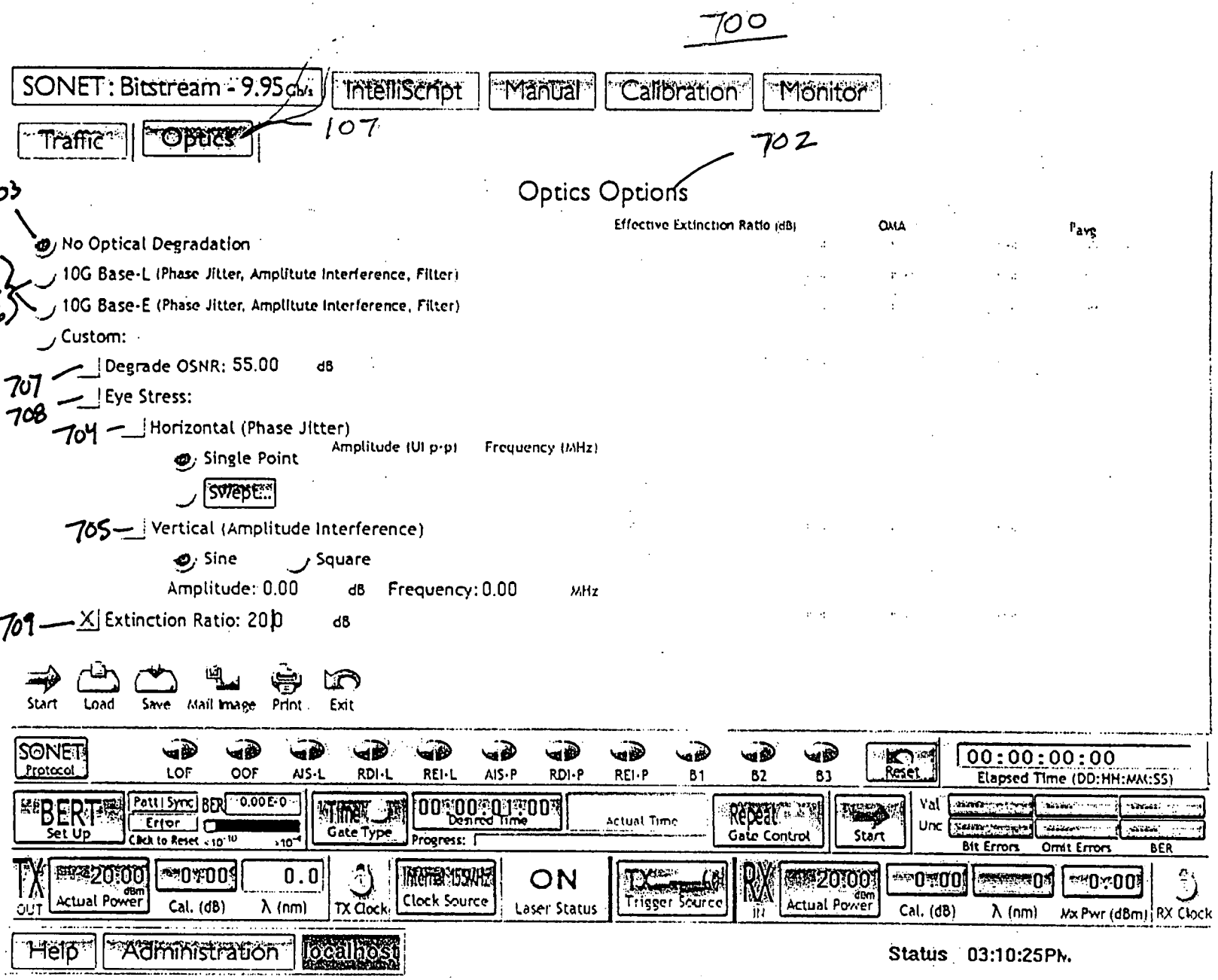

700
SONET: Bitstream - 9.95Gb/s
IntelliScript
Manual
Calibration
Monitor
Traffic
Optics
107
702
Optics Options
703
Effective Extinction Ratio (dB)
OMA
Pavg
No Optical Degradation
704
10G Base-L (Phase Jitter, Amplitute Interference, Filter)
705
706
10G Base-E (Phase Jitter, Amplitute Interference, Filter)
Custom:
707
Degrade OSNR: 55.00 dB
708
Eye Stress:
704
Horizontal (Phase Jitter)
Amplitude (UI p-p)
Frequency (MHz)
Single Point
Swept...
705
Vertical (Amplitude Interference)
Sine
Square
Amplitude: 0.00 dB
Frequency: 0.00 MHz
709
Extinction Ratio: 20.0 dB
Start
Load
Save
Mail Image
Print
Exit
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT Set Up
Patt | Sync
Error
BER
0.00E-0
Click to Reset
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 155MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX IN
20.00 dBm
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 03:10:25PM

Fig. 7

800

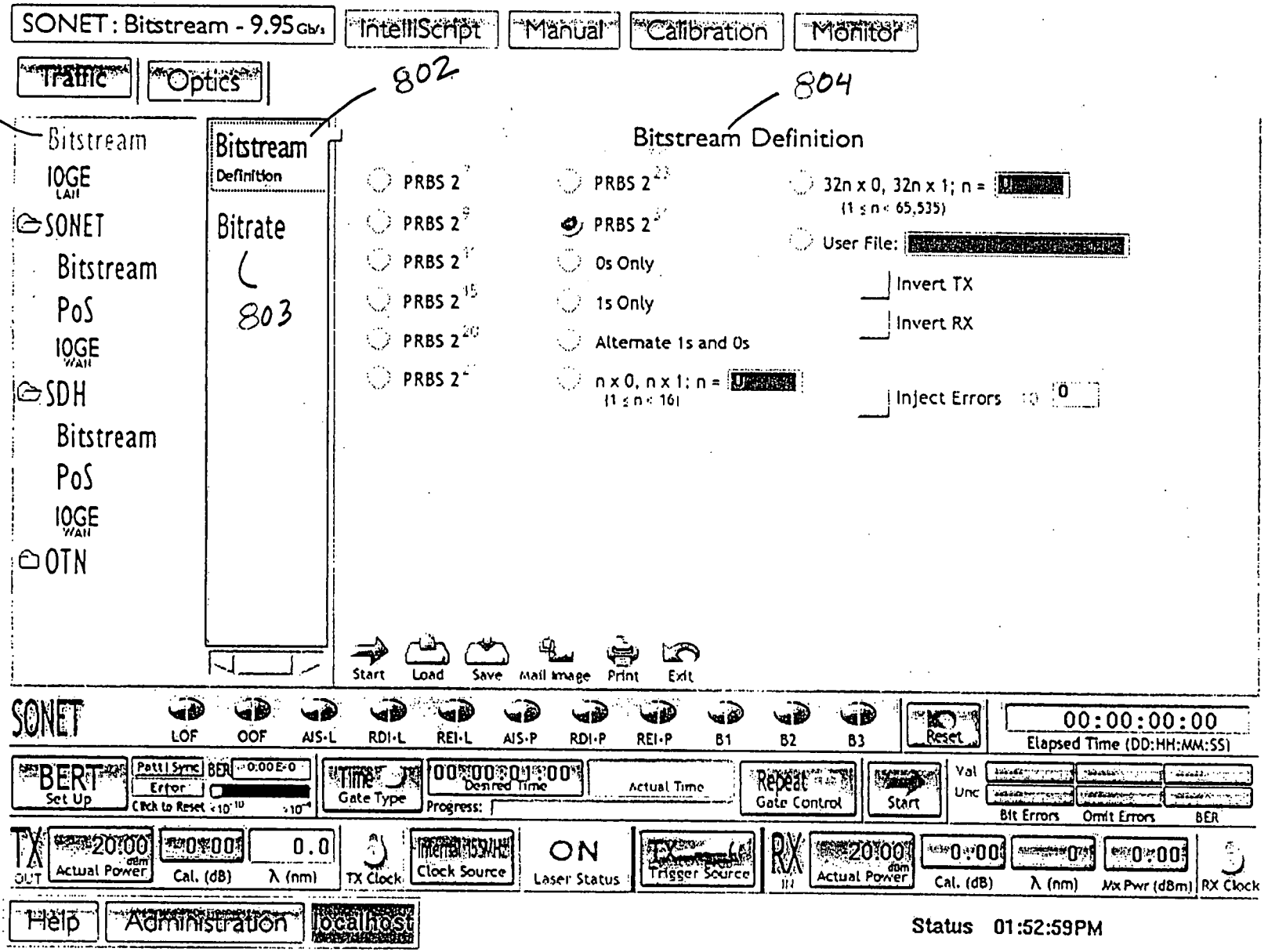

SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
Traffic
Optics
802
804
110
Bitstream
10GE LAN
SONET
Bitstream
PoS
10GE WAN
SDH
Bitstream
PoS
10GE WAN
OTN
Bitstream Definition
Bitrate
803
PRBS 2^7
PRBS 2^9
PRBS 2^11
PRBS 2^15
PRBS 2^20
PRBS 2^23
PRBS 2^31
0s Only
1s Only
Alternate 1s and 0s
n x 0, n x 1; n =
(1 ≤ n ≤ 16)
32n x 0, 32n x 1; n =
(1 ≤ n ≤ 65,535)
User File:
Invert TX
Invert RX
Inject Errors
Start
Load
Save
Mail Image
Print
Exit
SONET
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT Set Up
Patt Sync
Error
BER
Click to Reset
Time Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 155 MHz
Clock Source
ON
Laser Status
Trigger Source
RX IN
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.00
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 01:52:59PM

Fig. 8

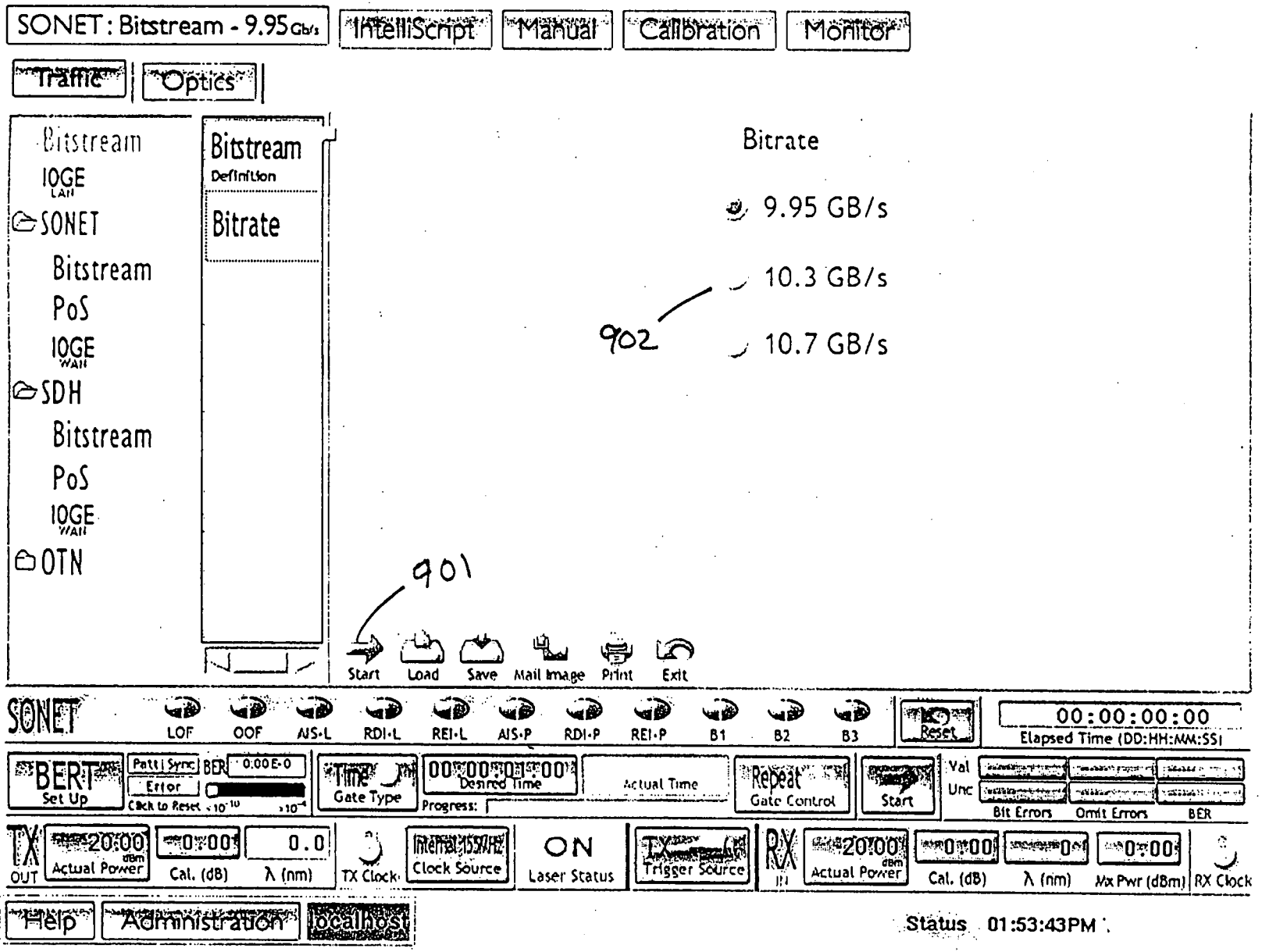
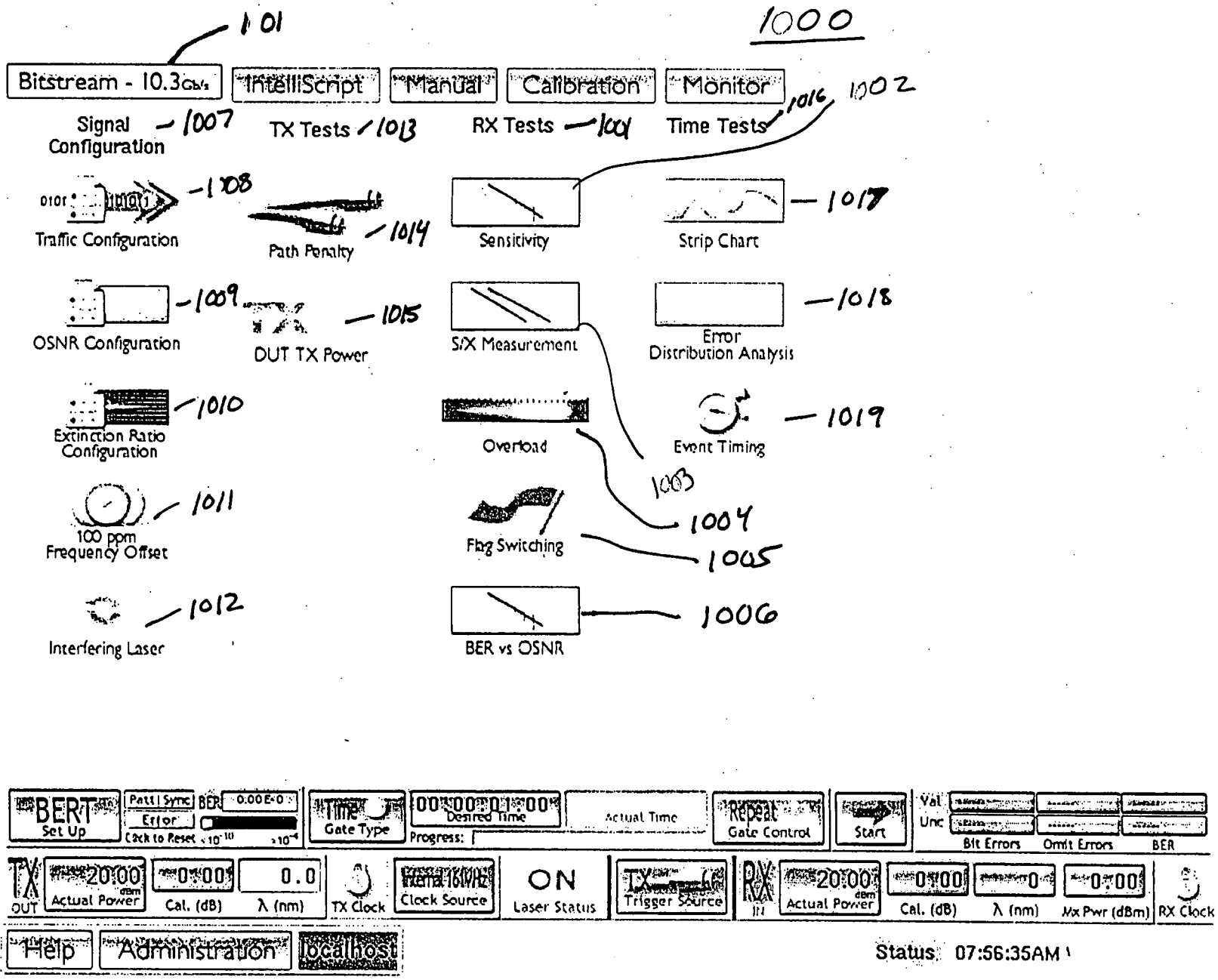

SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
Traffic
Optics
Bitstream
10GE LAN
SONET
Bitstream
PoS
10GE WAN
SDH
Bitstream
PoS
10GE WAN
OTN
Bitstream
Definition
Bitrate
Bitrate
9.95 GB/s
10.3 GB/s
10.7 GB/s
902
901
Start
Load
Save
Mail Image
Print
Exit
SONET
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT
Set Up
Patt | Sync
Error
Click to Reset
BER
0.00E-0
Time
Gate Type
00:00:01:00
Desired Time
Progress:
Actual Time
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX
OUT
20.00
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 155MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX
IN
20.00
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 01:53:43PM

Fig. 9


1000
101
Bitstream - 10.3Gb/s
IntelliScript
Manual
Calibration
Monitor
1002
Signal Configuration
1007
TX Tests
1013
RX Tests
1001
Time Tests
1016
Traffic Configuration
1008
Path Penalty
1014
Sensitivity
Strip Chart
1017
OSNR Configuration
1009
DUT TX Power
1015
S/X Measurement
Error Distribution Analysis
1018
Extinction Ratio Configuration
1010
Overload
Event Timing
1019
100 ppm Frequency Offset
1011
1003
1004
Flag Switching
1005
Interfering Laser
1012
BER vs OSNR
1006

BERT
Set Up
Patt | Sync
Error
Clck to Reset
BER
0.00E+0
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX
OUT
20.00
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 16MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX
IN
20.00
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status: 07:56:35AM

Fig. 10

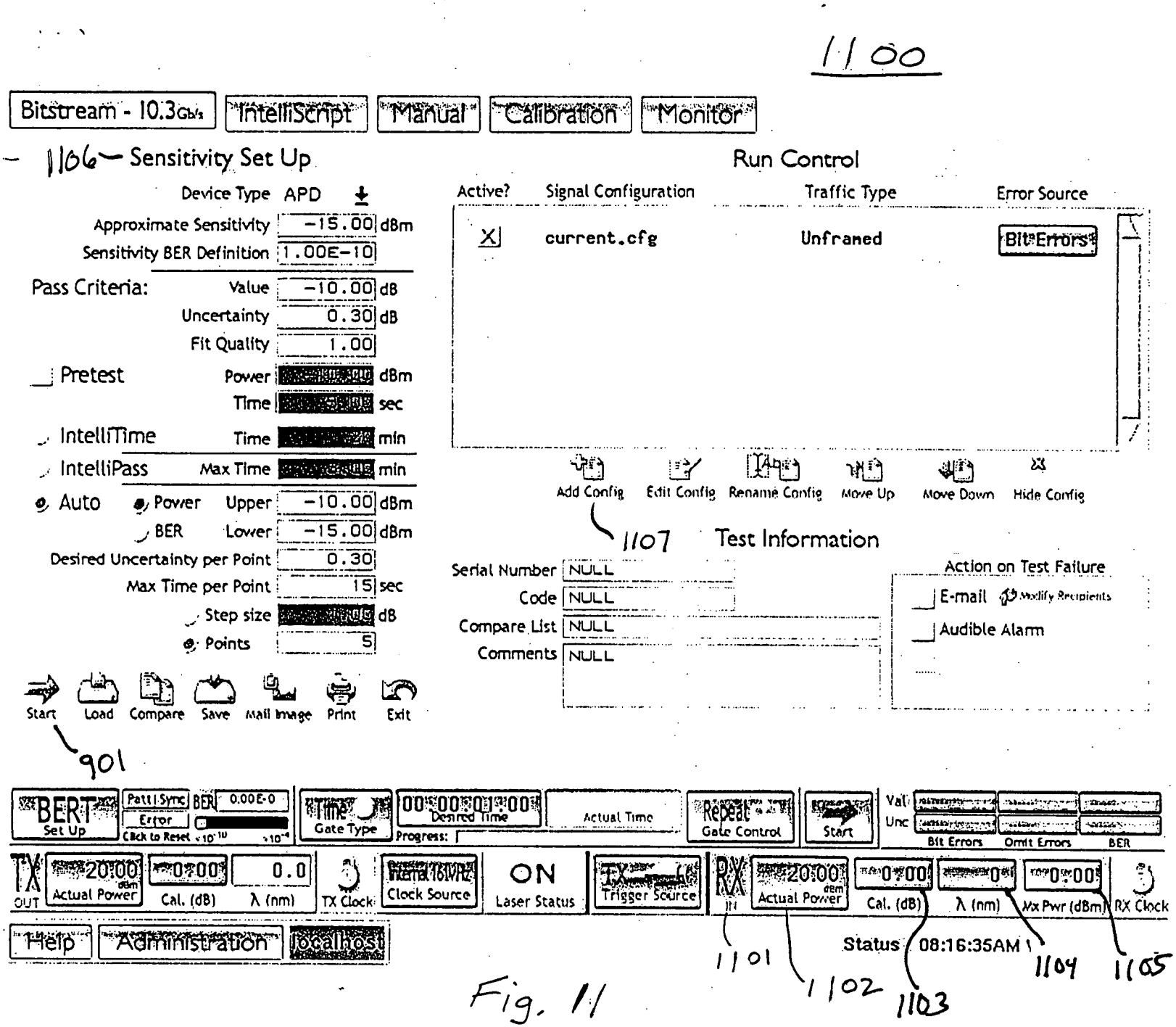

1100
Bitstream - 10.3Gb/s
IntelliScript
Manual
Calibration
Monitor
1106
Sensitivity Set Up
Device Type APD
Approximate Sensitivity -15.00 dBm
Sensitivity BER Definition 1.00E-10
Pass Criteria:
Value -10.00 dB
Uncertainty 0.30 dB
Fit Quality 1.00
Pretest
Power dBm
Time sec
IntelliTime
Time min
IntelliPass
Max Time min
Auto
Power
BER
Upper -10.00 dBm
Lower -15.00 dBm
Desired Uncertainty per Point 0.30
Max Time per Point 15 sec
Step size dB
Points 5
Start
Load
Compare
Save
Mail Image
Print
Exit
901
Run Control
Active?
Signal Configuration
Traffic Type
Error Source
X
current.cfg
Unframed
Bit Errors
Add Config
Edit Config
Rename Config
Move Up
Move Down
Hide Config
1107
Test Information
Serial Number NULL
Code NULL
Compare List NULL
Comments NULL
Action on Test Failure
E-mail
Modify Recipients
Audible Alarm
BER
Set Up
Patt I Sync
Error
Click to Reset
BER 0.00E-0
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX
OUT
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 161MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX
IN
20.00 dBm
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 08:16:35AM
1101
1102
1103
1104
1105

Fig. 11

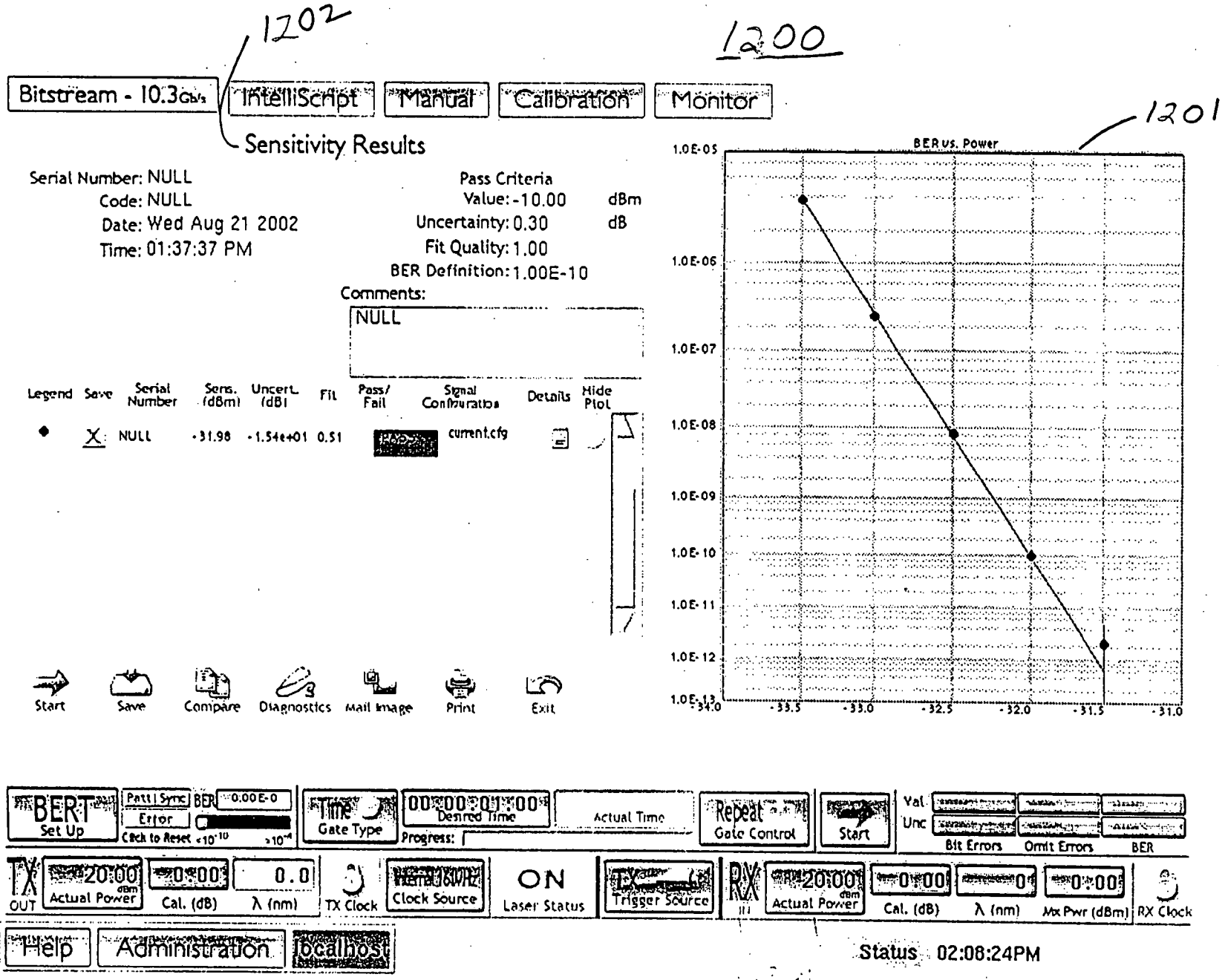

1202
1200
1201
Bitstream - 10.3Gb/s
IntelliScript
Manual
Calibration
Monitor
Sensitivity Results
Serial Number: NULL
Code: NULL
Date: Wed Aug 21 2002
Time: 01:37:37 PM
Pass Criteria
Value: -10.00 dBm
Uncertainty: 0.30 dB
Fit Quality: 1.00
BER Definition: 1.00E-10
Comments:
NULL
Legend Save Serial Number Sens. (dBm) Uncert. (dB) Fit Pass/ Fail Signal Configuration Details Hide Plot
NULL -31.98 -1.54e+01 0.51 current.cfg
BER vs. Power
1.0E-05
1.0E-06
1.0E-07
1.0E-08
1.0E-09
1.0E-10
1.0E-11
1.0E-12
1.0E-13
-34.0
-33.5
-33.0
-32.5
-32.0
-31.5
-31.0
Start
Save
Compare
Diagnostics
Mail Image
Print
Exit
BERT Set Up
Patt | Sync
Error
BER
0.00E-0
Click to Reset
Time Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 10MHz
Clock Source
ON
Laser Status
Trigger Source
RX IN
20.00 dBm
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 02:08:24PM

Fig. 12

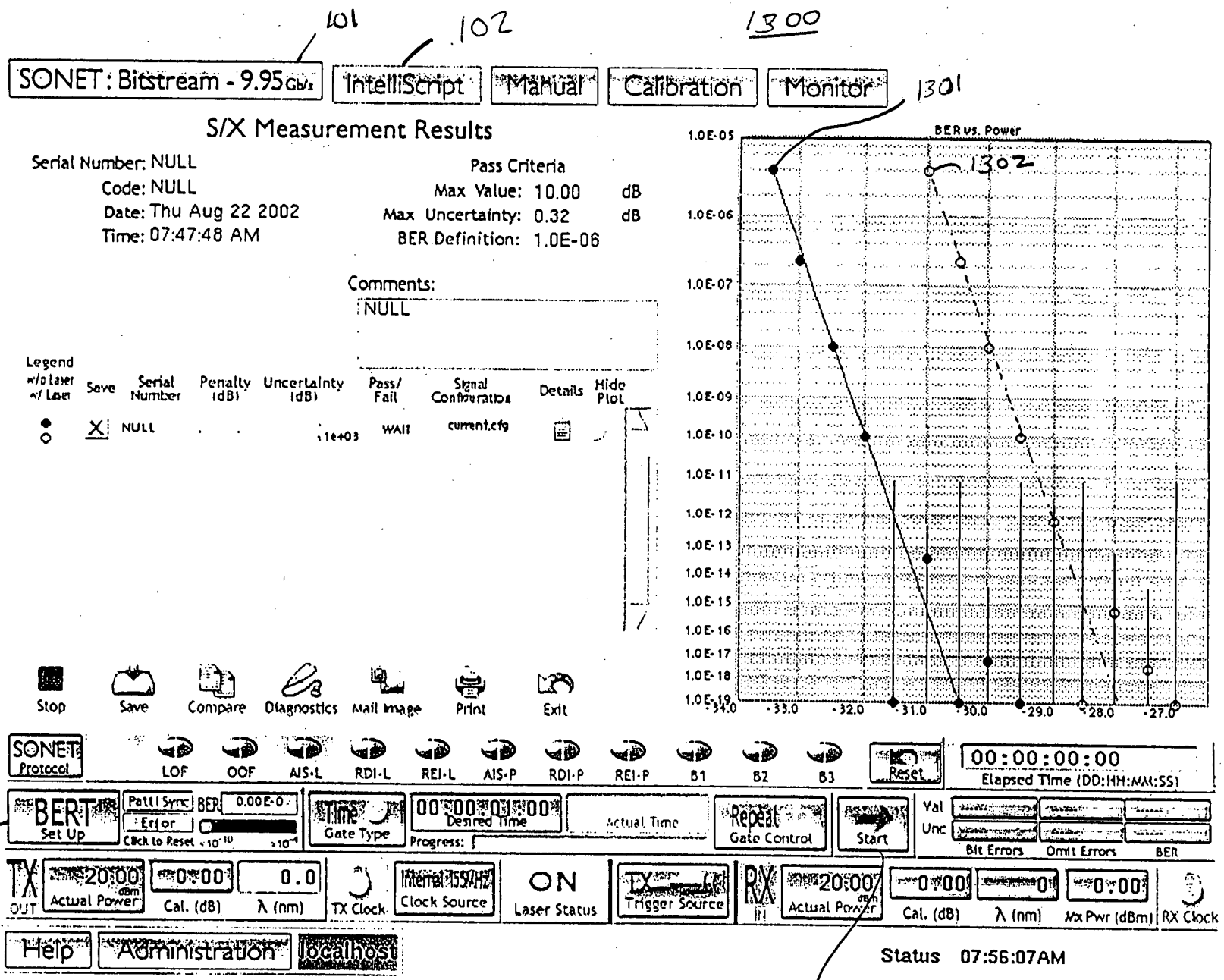

101
102
1300
SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
1301
S/X Measurement Results
Serial Number: NULL
Code: NULL
Date: Thu Aug 22 2002
Time: 07:47:48 AM
Pass Criteria
Max Value: 10.00 dB
Max Uncertainty: 0.32 dB
BER Definition: 1.0E-06
Comments:
NULL
Legend
w/o Laser
w/ Laser
Save
Serial Number
Penalty (dB)
Uncertainty (dB)
Pass/ Fail
Signal Configuration
Details
Hide Plot
NULL
1e+03
WAIT
current.cfg
BER vs. Power
1302
1.0E-05
1.0E-06
1.0E-07
1.0E-08
1.0E-09
1.0E-10
1.0E-11
1.0E-12
1.0E-13
1.0E-14
1.0E-15
1.0E-16
1.0E-17
1.0E-18
1.0E-19
-34.0
-33.0
-32.0
-31.0
-30.0
-29.0
-28.0
-27.0
Stop
Save
Compare
Diagnostics
Mail Image
Print
Exit
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT
Set Up
Patt | Sync
Error
Click to Reset
BER
0.00E-0
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
1303
TX
OUT
20.00
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 155MHz
Clock Source
ON
Laser Status
TX
Trigger Source
RX
IN
20.00
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 07:56:07AM
1304

Fig. 13

1400

SONET : Bitstream - 9.95 Gb/s | IntelliScript | Manual | Calibration | Monitor

Test Information

Serial Number: NULL
Code: NULL
Run: NULL
Calibration File:

Comments: NULL

Action on Test Failure
- [x] E-mail
- [ ] Audible Alarm
- [ ] Intelligent Fault Finder

IntelliScript Set Up 1401

Active?	Save?	Test	Test Configuration	Traffic Type / Signal Configuration	User Parameters	Print?	Page Break After?	Compare
[x]	[x]	Sensitivity	default.par	SONET/Unframed default.cfg		[x]	[ ]	
[x]	[x]	Overload	default.par	Unframed default.cfg		[x]	[ ]	NULL
[x]	[x]	S/X Penalty	default.par	Unframed default.cfg		[x]	[ ]	NULL

Start | Load | Add Config | Move Up | Move Down | Hide Config | Save | Mail Image | Print

1401 1403 1402

Fig. 14

Help | Administration | localhost

Status 04:22:02PM

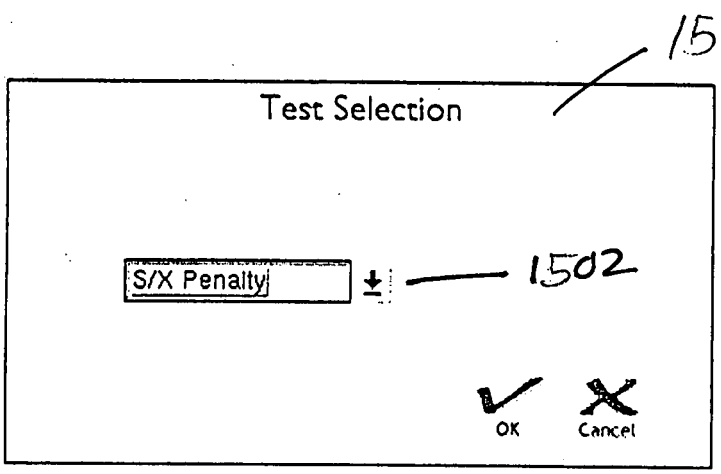


Fig. 15

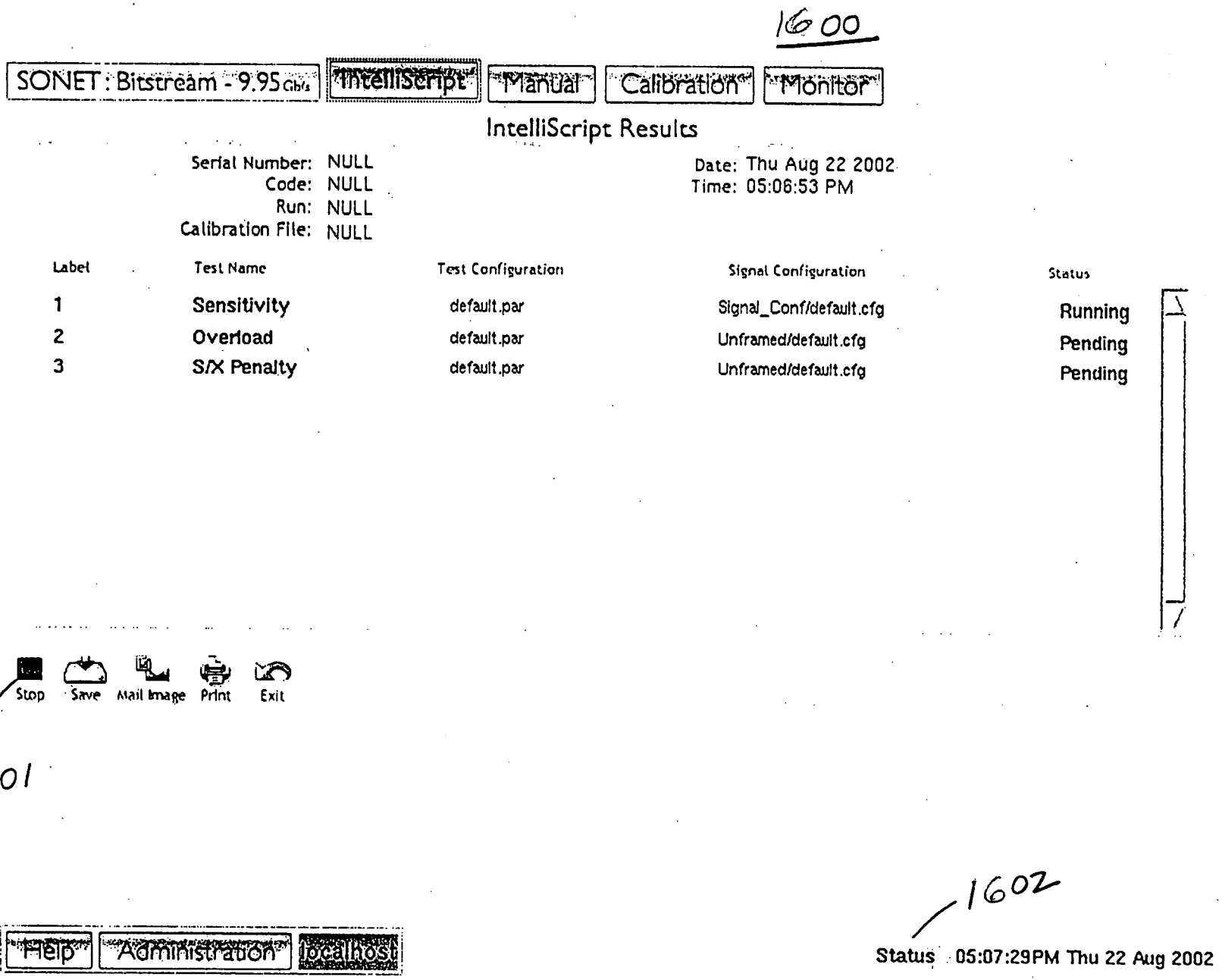

1600
SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
IntelliScript Results
Serial Number: NULL
Code: NULL
Run: NULL
Calibration File: NULL
Date: Thu Aug 22 2002
Time: 05:06:53 PM
Label
Test Name
Test Configuration
Signal Configuration
Status
1
Sensitivity
default.par
Signal_Conf/default.cfg
Running
2
Overload
default.par
Unframed/default.cfg
Pending
3
S/X Penalty
default.par
Unframed/default.cfg
Pending
Stop
Save
Mail Image
Print
Exit
1601
1602
Help
Administration
localhost
Status
05:07:29PM Thu 22 Aug 2002

Fig. 16

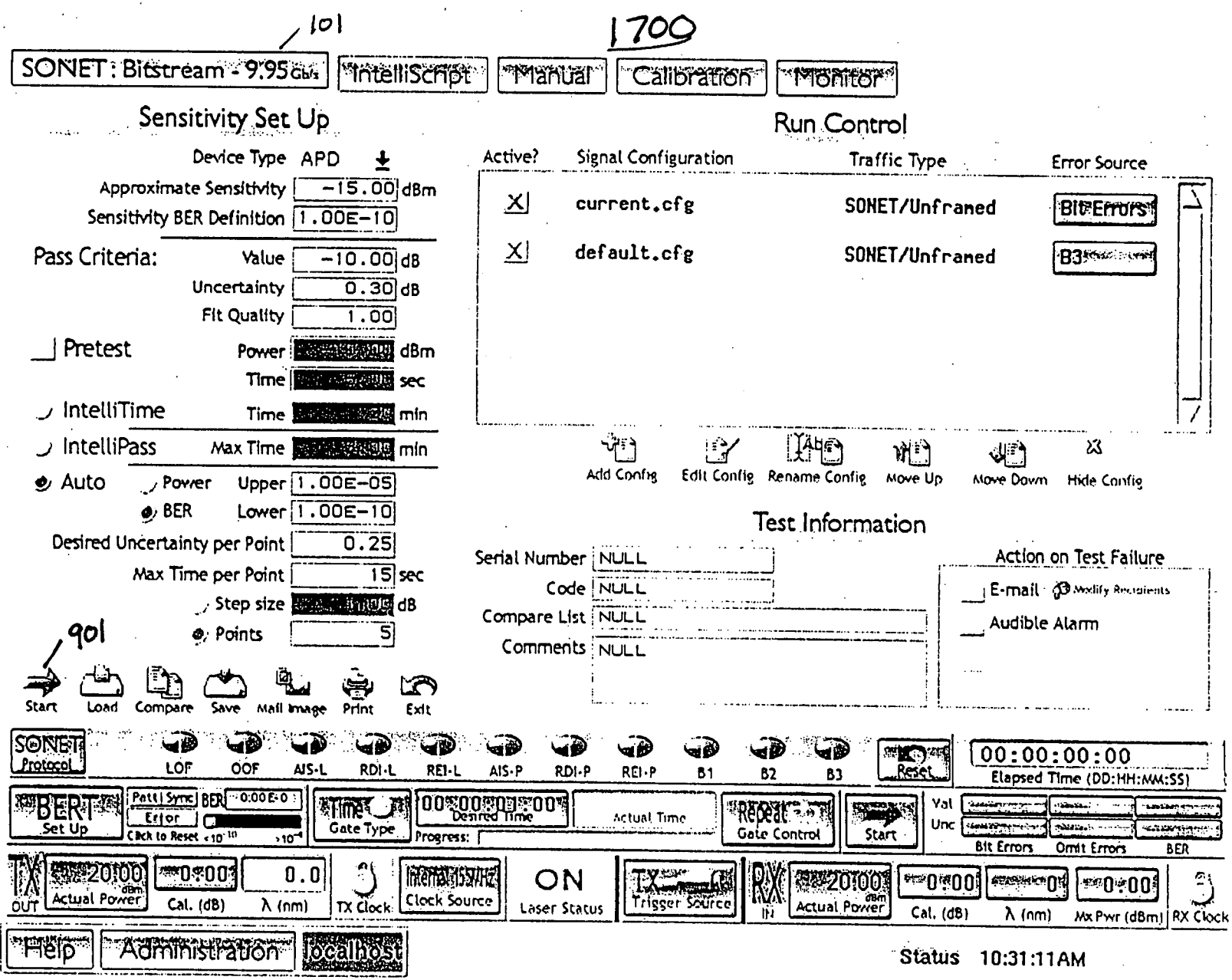

101
1700
SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
Sensitivity Set Up
Device Type APD
Approximate Sensitivity -15.00 dBm
Sensitivity BER Definition 1.00E-10
Pass Criteria:
Value -10.00 dB
Uncertainty 0.30 dB
Fit Quality 1.00
Pretest
Power dBm
Time sec
IntelliTime
Time min
IntelliPass
Max Time min
Auto
Power
BER
Upper 1.00E-05
Lower 1.00E-10
Desired Uncertainty per Point 0.25
Max Time per Point 15 sec
Step size dB
Points 5
901
Start
Load
Compare
Save
Mail Image
Print
Exit
Run Control
Active?
Signal Configuration
Traffic Type
Error Source
X current.cfg SONET/Unframed Bit Errors
X default.cfg SONET/Unframed B3
Add Config
Edit Config
Rename Config
Move Up
Move Down
Hide Config
Test Information
Serial Number NULL
Code NULL
Compare List NULL
Comments NULL
Action on Test Failure
E-mail
Modify Recipients
Audible Alarm
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT Set Up
Patt | Sync
Error
BER
Click to Reset
Time Gate Type
Desired Time
Actual Time
Progress:
Repeat Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
Actual Power
Cal. (dB)
λ (nm)
TX Clock
Clock Source
ON
Laser Status
Trigger Source
RX IN
Actual Power
Cal. (dB)
λ (nm)
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 10:31:11AM

Fig. 17

1800

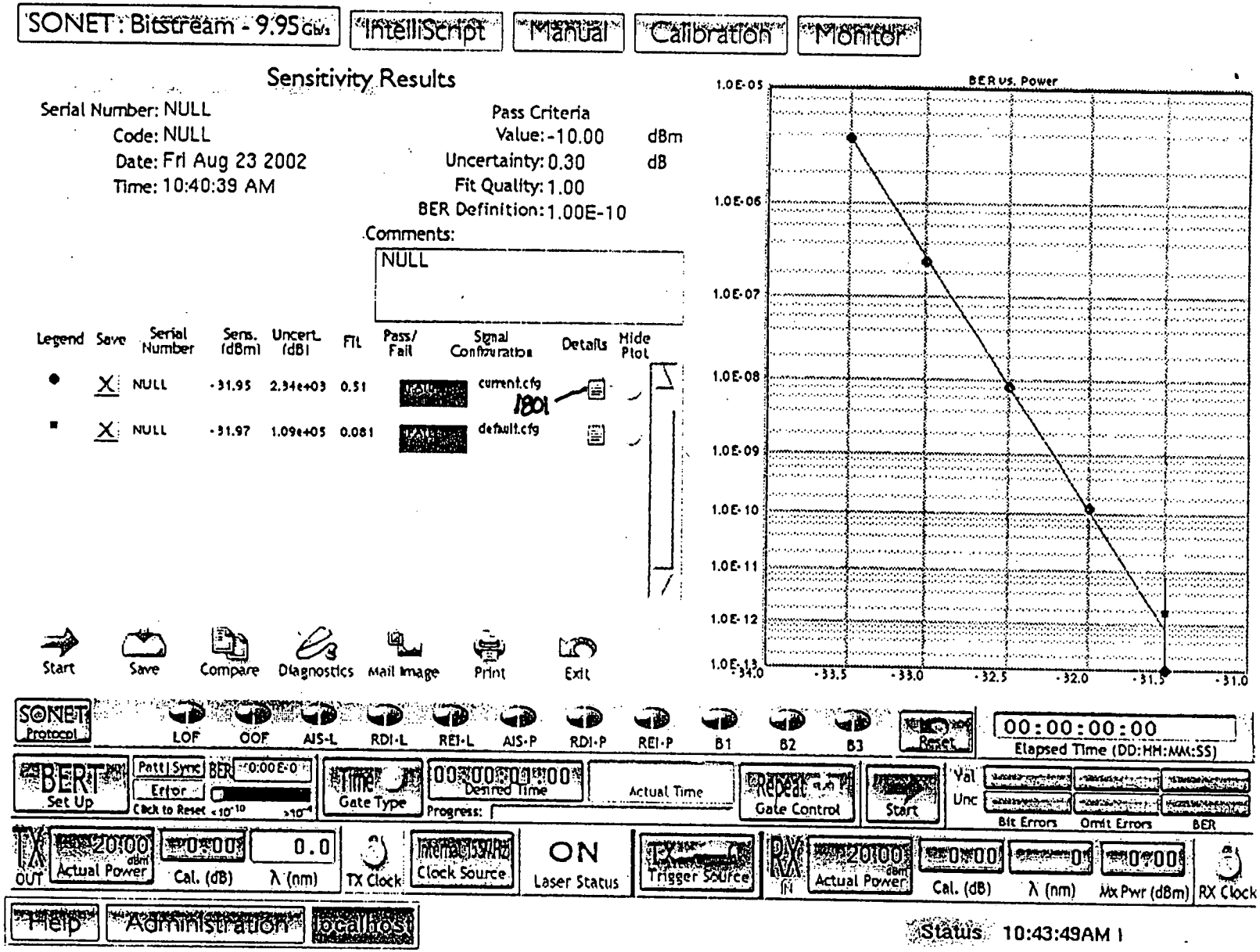

SONET : Bitstream - 9.95 Gb/s
IntelliScript
Manual
Calibration
Monitor
Sensitivity Results
Serial Number: NULL
Code: NULL
Date: Fri Aug 23 2002
Time: 10:40:39 AM
Pass Criteria
Value: -10.00 dBm
Uncertainty: 0.30 dB
Fit Quality: 1.00
BER Definition: 1.00E-10
Comments:
NULL
Legend Save Serial Number Sens. (dBm) Uncert. (dB) Fit Pass/Fail Signal Configuration Details Hide Plot
X NULL -31.95 2.34e+03 0.51 current.cfg
X NULL -31.97 1.09e+05 0.081 default.cfg
1801
BER vs. Power
1.0E-05
1.0E-06
1.0E-07
1.0E-08
1.0E-09
1.0E-10
1.0E-11
1.0E-12
1.0E-13
-34.0
-33.5
-33.0
-32.5
-32.0
-31.5
-31.0
Start
Save
Compare
Diagnostics
Mail Image
Print
Exit
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:00:00
Elapsed Time (DD:HH:MM:SS)
BERT Set Up
Patt Sync
Error
BER
0.00E-0
Click to Reset
Time
Gate Type
00:00:01:00
Desired Time
Actual Time
Progress:
Repeat
Gate Control
Start
Val
Unc
Bit Errors
Omit Errors
BER
TX OUT
20.00 dBm
Actual Power
0.00
Cal. (dB)
0.0
λ (nm)
TX Clock
Internal 9.95Gb/s
Clock Source
ON
Laser Status
TX
Trigger Source
RX IN
20.00 dBm
Actual Power
0.00
Cal. (dB)
0
λ (nm)
0.00
Mx Pwr (dBm)
RX Clock
Help
Administration
localhost
Status 10:43:49AM

Fig. 18

1900

Test Details

Date	Fri Aug 23 2002
Time	10:41:52
Signal_configuration	Signal_Conf/OC192_common/SONE
Error_type	PRBS
Test_type	MANUAL
Device_type	APD
Serial_number	NULL
Code	NULL
Comparison_list	NULL
Comments	NULL
Email	0
Auto_limits_type	1
Do_pretest	1
Pretest_power	-10.000000
Pretest_time	5.000000
Approximate_value	-15.000000
BER_definition	0.000000
Auto_type	0
Best_test_time	5.000000
Pass_value	-10.000000
Pass_uncertainty	0.300000
Pass_fit_quality	1.000000
Number_points	0
Max_time0	0.000000
Power_step0	0.000000
Start_power0	-15.000000

1901

OK

1902

Fig. 19

2000

SONET : Bitstream - 9.95 Gb/s | IntelliScript | External Instrument Control | Internal Proc. Ctrl.

2001

Signal Configuration

- Traffic Configuration
- Stressed Eye & Other Degradations
- Switch Setup
- Clock Settings

TX Tests

- Path Penalty
- DUT TX Power

RX Tests

- Sensitivity
- S/X Measurement
- Overload
- BER vs OSNR

Time Tests

- BERT Tests

SONET Tests

- SONET Statistics & Error Injection

Fig. 20

SONET Protocol | LOF | OOF | AIS-L | RDI-L | REI-L | AIS-P | RDI-P | REI-P | B1 | B2 | B3 | Reset | 00:00:00:10 Elapsed Time (DD:HH:MM:SS)

Instantaneous BERT Setup | Sync | Error | BER | Click to Reset | Time Gate Type | Progress: | Actual Time | Accum Totals Bit Rates Gate Control | Start | Val | Use | RxCorrB2Rt | Rx ES-SRt | RxESRt

Out to DUT | -9.00 dBm Actual Power | -6.70 dBm O/MA | 0.00 dB Calibration | 1550 nm λ | None Optical Degrade | TX Clock | ON Laser Status | TX Trigger Source | In from DUT | -9.00 dBm Actual Power | -6.70 dBm O/MA | 0.00 dB Calibration | 1550 nm λ | 9.00 ER (dB) | RX Clock

HELP | ADMIN | localhost | Status | 11:36:16AM Wed 10 Sep 2003

Fig. 21

2100

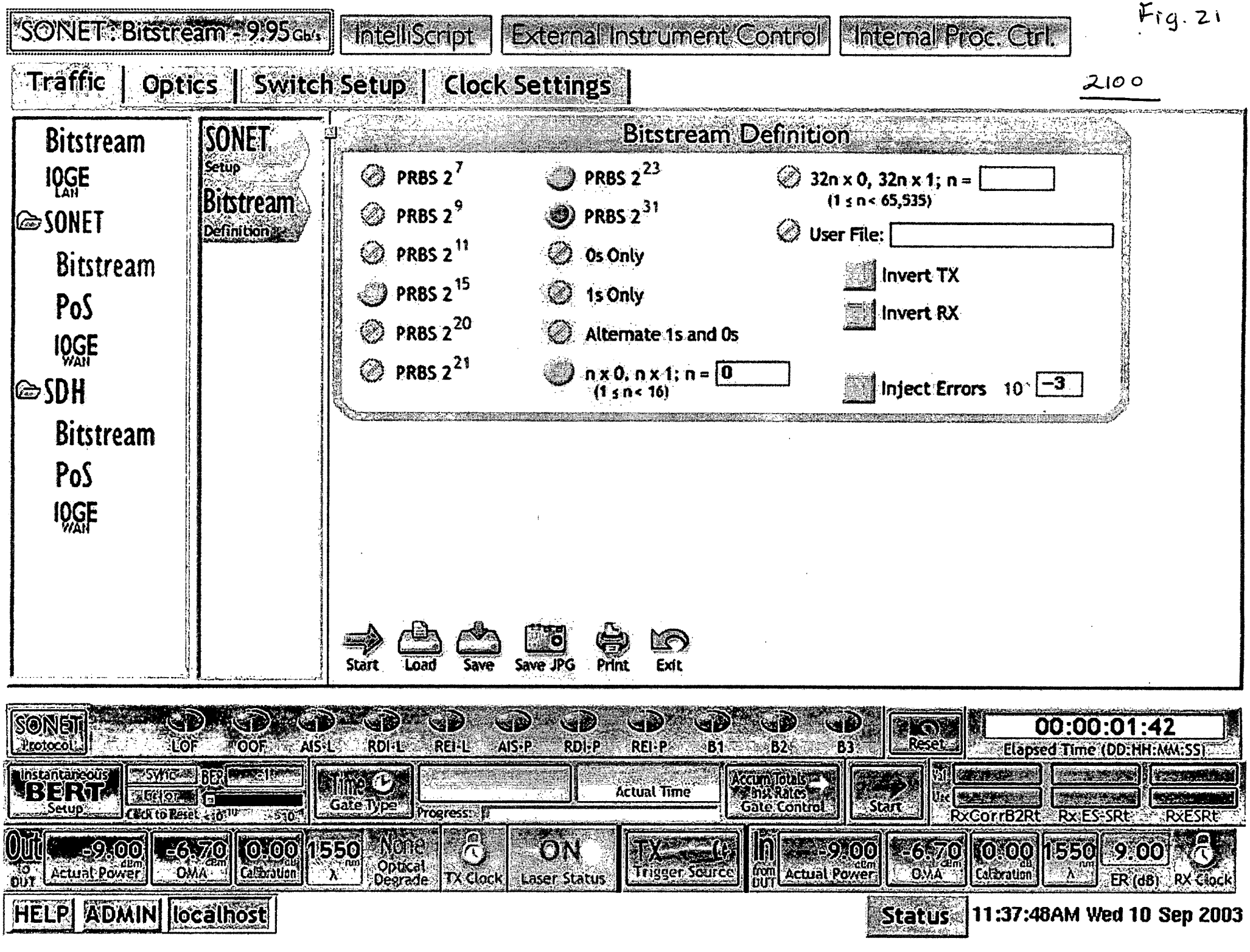
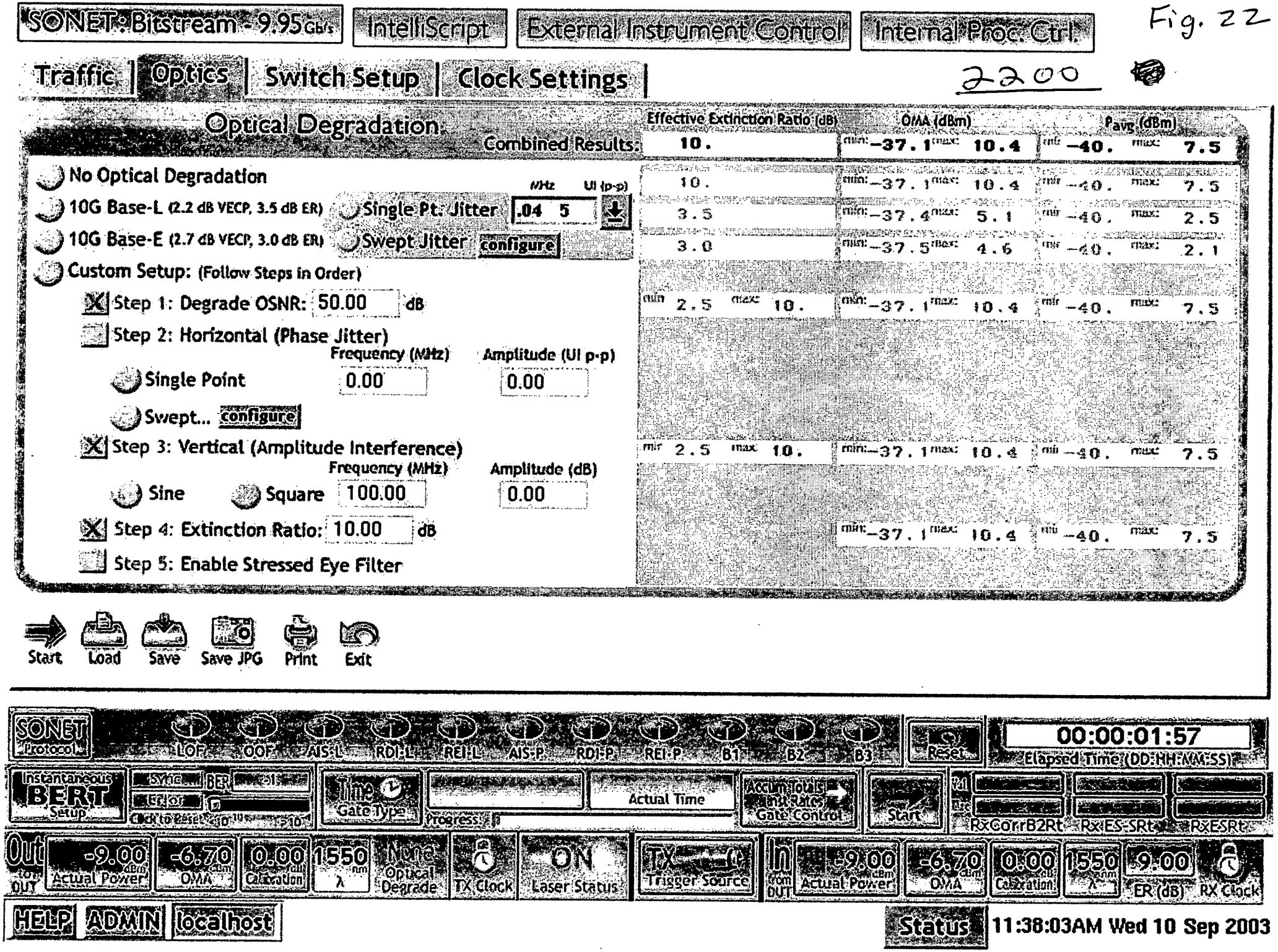
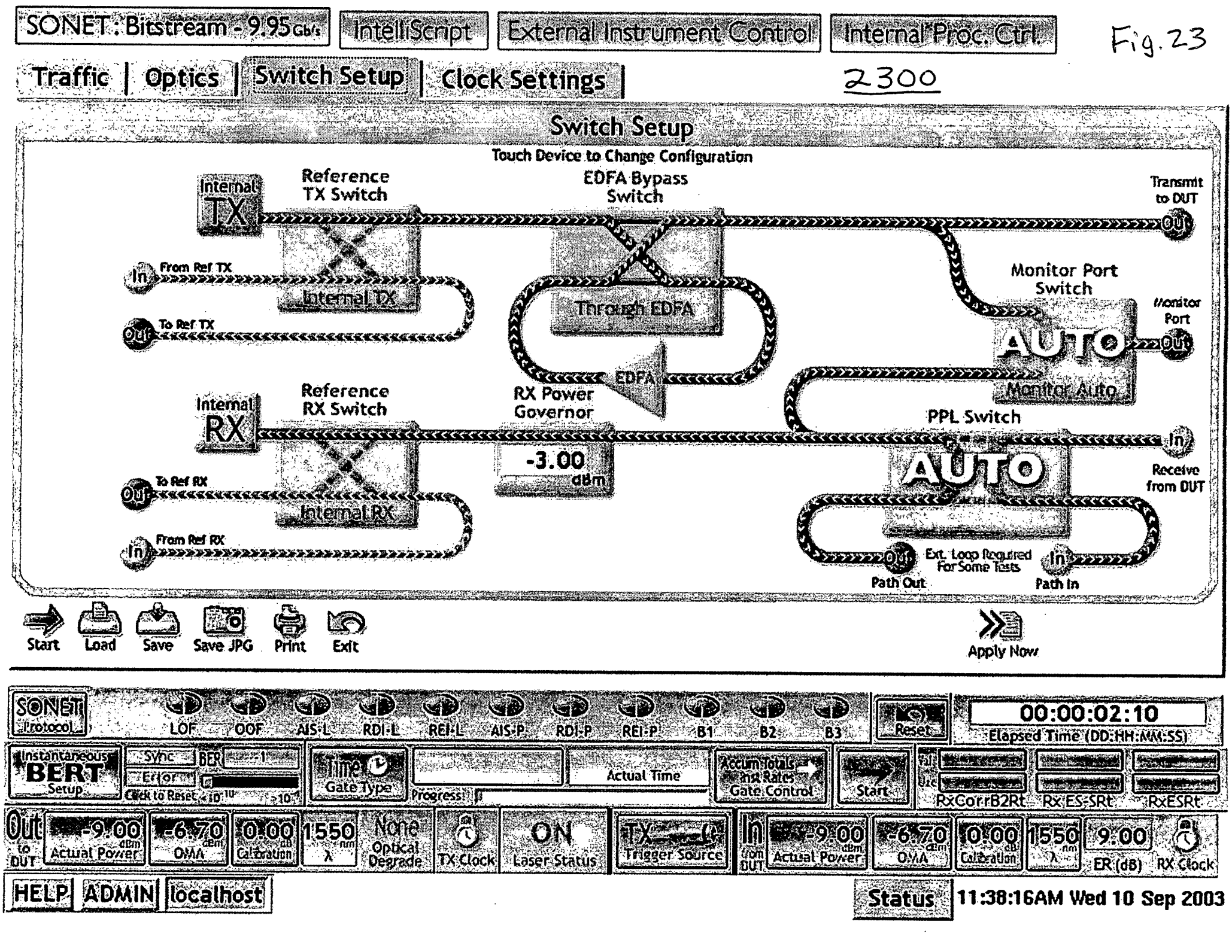

SONET: Bitstream - 9.95 Gb/s
IntelliScript
External Instrument Control
Internal Proc. Ctrl.
Traffic
Optics
Switch Setup
Clock Settings
Bitstream
10GE LAN
SONET
Bitstream
PoS
10GE WAN
SDH
Bitstream
PoS
10GE WAN
SONET Setup
Bitstream Definition
Bitstream Definition
PRBS 2^7
PRBS 2^9
PRBS 2^11
PRBS 2^15
PRBS 2^20
PRBS 2^21
PRBS 2^23
PRBS 2^31
0s Only
1s Only
Alternate 1s and 0s
n x 0, n x 1; n = 0
(1 ≤ n < 16)
32n x 0, 32n x 1; n =
(1 ≤ n < 65,535)
User File:
Invert TX
Invert RX
Inject Errors 10^ -3
Start
Load
Save
Save JPG
Print
Exit
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:01:42
Elapsed Time (DD:HH:MM:SS)
Instantaneous BERT Setup
Sync
BER
Click to Reset
Time Gate Type
Actual Time
Progress:
Accum Totals Inst. Rates Gate Control
Start
RxCorrB2Rt
Rx ES-SRt
RxESRt
Out
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
None Optical Degrade
TX Clock
ON Laser Status
TX Trigger Source
In from OUT
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
9.00 ER (dB)
RX Clock
HELP
ADMIN
localhost
Status
11:37:48AM Wed 10 Sep 2003

Fig. 22


SONET: Bitstream - 9.95Gb/s
IntelliScript
External Instrument Control
Internal Proc. Ctrl
Traffic
Optics
Switch Setup
Clock Settings
2200
Optical Degradation:
Combined Results:
Effective Extinction Ratio (dB)
OMA (dBm)
Pavg (dBm)
10. min: -37.1 max: 10.4 min: -40. max: 7.5
No Optical Degradation
10G Base-L (2.2 dB VECP, 3.5 dB ER)
10G Base-E (2.7 dB VECP, 3.0 dB ER)
Custom Setup: (Follow Steps in Order)
MHz
UI (p-p)
Single Pt. Jitter
.04 5
Swept Jitter
configure
10. min: -37.1 max: 10.4 min: -40. max: 7.5
3.5 min: -37.4 max: 5.1 min: -40. max: 2.5
3.0 min: -37.5 max: 4.6 min: -40. max: 2.1
Step 1: Degrade OSNR: 50.00 dB
min 2.5 max 10. min: -37.1 max: 10.4 min: -40. max: 7.5
Step 2: Horizontal (Phase Jitter)
Frequency (MHz)
Amplitude (UI p-p)
Single Point
0.00
0.00
Swept... configure
min 2.5 max 10. min: -37.1 max: 10.4 min: -40. max: 7.5
Step 3: Vertical (Amplitude Interference)
Frequency (MHz)
Amplitude (dB)
Sine
Square
100.00
0.00
Step 4: Extinction Ratio: 10.00 dB
min: -37.1 max: 10.4 min: -40. max: 7.5
Step 5: Enable Stressed Eye Filter
Start
Load
Save
Save JPG
Print
Exit
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:01:57
Elapsed Time (DD:HH:MM:SS)
Instantaneous BERT Setup
SYNC
BER
EC-01
Clock to Reset
Time Gate Type
Progress:
Actual Time
Accum Totals Limit Rates Gate Control
Start
RxCorrB2Rt
RxES-SRt
RxESRt
Out to DUT
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
None Optical Degrade
TX Clock
ON Laser Status
TX Trigger Source
In from DUT
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
9.00 dB ER (dB)
RX Clock
HELP
ADMIN
localhost
Status
11:38:03AM Wed 10 Sep 2003


SONET : Bitstream - 9.95 Gb/s
IntelliScript
External Instrument Control
Internal Proc. Ctrl.
Fig. 23
Traffic
Optics
Switch Setup
Clock Settings
2300
Switch Setup
Touch Device to Change Configuration
Internal TX
Reference TX Switch
EDFA Bypass Switch
Transmit to DUT
Out
From Ref TX
In
Internal TX
To Ref TX
Out
Through EDFA
Monitor Port Switch
Monitor Port
AUTO
Out
EDFA
Monitor Auto
Internal RX
Reference RX Switch
RX Power Governor
PPL Switch
In
-3.00 dBm
AUTO
Receive from DUT
To Ref RX
Out
Internal RX
From Ref RX
In
Out
Path Out
Ext. Loop Required For Some Tests
In
Path In
Start
Load
Save
Save JPG
Print
Exit
Apply Now
SONET Protocol
LOF
OOF
AIS-L
RDI-L
REI-L
AIS-P
RDI-P
REI-P
B1
B2
B3
Reset
00:00:02:10
Elapsed Time (DD:HH:MM:SS)
Instantaneous BERT Setup
Sync
Error
BER
Click to Reset
Time Gate Type
Progress
Actual Time
Accum Totals and Rates Gate Control
Start
RxCorrB2Rt
RxES-SRt
RxESRt
Out to DUT
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
None Optical Degrade
TX Clock
ON Laser Status
TX Trigger Source
In from DUT
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
9.00 ER (dB)
RX Clock
HELP
ADMIN
localhost
Status
11:38:16AM Wed 10 Sep 2003

SONET: Bitstream - 9.95Gb/s | IntelliScript | External Instrument Control | Internal Proc. Ctrl.

Traffic | Optics | Switch Setup | Clock Settings

2400

Fig. 24

Clock Settings

			Bit Rate (Gb/s)	Standard Protocol	External Clock Rate (MHz) +/- 20ppm
Clock Source:	Internal	Clock Rate:	9.95328	SONET/SDH	155.52
	External (Must attach external clock of appropriate rate if this option is selected.)		10.3125	10GE LAN	161.1328
	RX Derived		10.70922532	G.709	167.3316

Start | Load | Save | Save JPG | Print | Exit

Apply Now

SONET Protocol | LOF | OOF | AIS-L | RDI-L | REI-L | AIS-P | RDI-P | REI-P | B1 | B2 | B3 | Reset | 00:00:02:27 Elapsed Time (DD:HH:MM:SS)

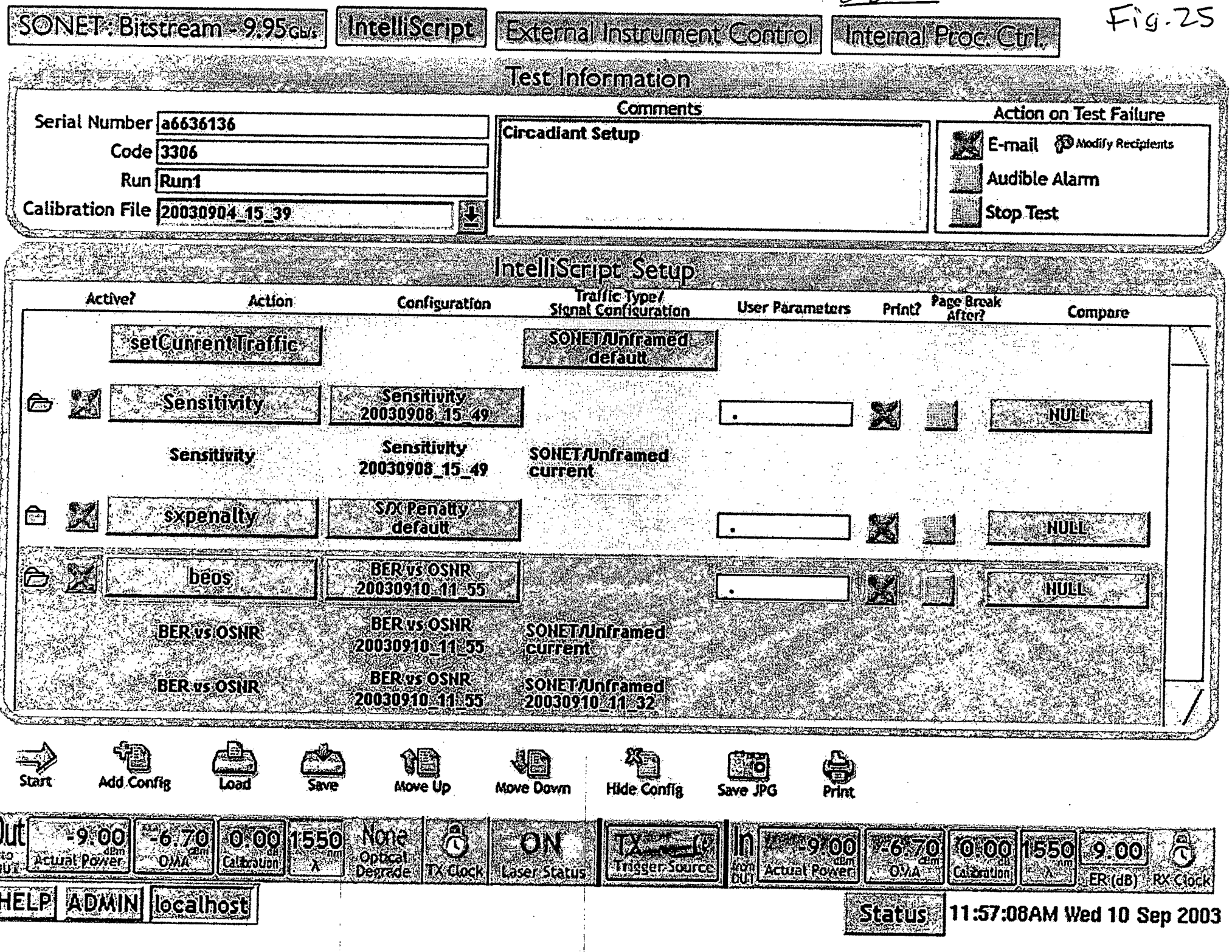
Instantaneous BERT Setup | Sync | BER -1 | Error | Click to Reset 10^-10 10^-4 | Timer Gate Type | Progress: | Actual Time | Accum Totals and Rates Gate Control | Start | RxCorrB2Rt | RxES-SRt | RxESRt

Out to DUT | -9.00 dBm Actual Power | -6.70 dBm OMA | 0.00 dB Calibration | 1550 nm λ | None Optical Degrade | TX Clock | ON Laser Status | TX Trigger Source | In from DUT | -9.00 dBm Actual Power | -6.70 dBm OMA | 0.00 dB Calibration | 1550 nm λ | 9.00 ER (dB) | RX Clock

HELP | ADMIN | localhost | Status | 11:38:33AM Wed 10 Sep 2003

2500

Fig. 25


SONET: Bitstream - 9.95Gb/s
IntelliScript
External Instrument Control
Internal Proc. Ctrl.
Test Information
Serial Number a6636136
Code 3306
Run Run1
Calibration File 20030904_15_39
Comments
Circadiant Setup
Action on Test Failure
E-mail
Modify Recipients
Audible Alarm
Stop Test
IntelliScript Setup
Active?
Action
Configuration
Traffic Type/ Signal Configuration
User Parameters
Print?
Page Break After?
Compare
setCurrentTraffic
SONET/Unframed default
Sensitivity
Sensitivity 20030908_15_49
NULL
Sensitivity
Sensitivity 20030908_15_49
SONET/Unframed current
sxpenalty
SX Penalty default
NULL
beos
BER vs OSNR 20030910_11_55
NULL
BER vs OSNR
BER vs OSNR 20030910_11_55
SONET/Unframed current
BER vs OSNR
BER vs OSNR 20030910_11_55
SONET/Unframed 20030910_11_32
Start
Add Config
Load
Save
Move Up
Move Down
Hide Config
Save JPG
Print
Out
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
None Optical Degrade
TX Clock
ON Laser Status
TX Trigger Source
In
-9.00 dBm Actual Power
-6.70 dBm OMA
0.00 dB Calibration
1550 nm λ
9.00 ER (dB)
RX Clock
HELP
ADMIN
localhost
Status
11:57:08AM Wed 10 Sep 2003